

STATE OF MINNESOTA OFFICE OF THE ATTORNEY GENERAL ST. PAUL 55155

WARREN SPANNAUS ATTORNEY GENERAL

July 27, 1981



ADDRESS REPLY TO ATTORNEY GENERAL'S OFFICE POLLUTION CONTROL DIVISION 1935 WEST COUNTY ROAD B-2 ROSEVILLE, MN 55113 TELEPHONE (612) 296-7342

PRIVILEGED

Jim Pankanin (5EWHME) Environmental Engineer Enforcement Division EPA Region V 230 Dearborn Chicago, Illinois 60604

Re: U.S. v. Reilly Tar & Chemical Corp. File Civ. No. 4-80-469

Dear Jim:

Enclosed are copies of the September 10, 1980, "tasks memo" put together for budget planning by Mike Convery, Dennis Coyne, Rick Ferguson and Marc Hult, and of Dennis Coyne's October 1, 1980 update memo. We thought these might be helpful in the budget planning you are currently doing.

yery truly yours,

STEPHEN SHAKMAN Special Assistant Attorney General

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Prairie du Chien - Jordan aquifer

1. USGS Prairie du Chien - Jordan Aquifer Project

Objectives are to (1) develop the ability to predict contaminent movement in the Prairie du Chien - Jordan aquifer, (2) preserve continuity in the collection of chemical and hydrologic data, (3) provide for consultation with the US Geological Survey by State and local agencies and their consultants, and (4) provide for continuing geophysical logging and evaluation of multiaquifer wells as they are located in the field. See "Transport of Coal-Tar Derivatives in the Prairie du Chien-Jordan Aquifer, St. Louis Park Area, Minnesota", dated August, 1980, and attached as Exhibit No. 1.

Dates: Federal PY 81 (10/80 to 9/81).

Cash: \$110,000. See Exhibit No.1.

Services to be Provided by Agencies: See Exhibit No. 1.

Funding and Participation:

Funded By		Performed By	
MPCA	\$ 5,000.		
MDH	\$ 15,000.	Yes	
AG	L	<u>.</u>	
<u>slp</u>	\$ 10,000	Yes	
<u>USCS</u>	\$ 30,000.	Yes	
EPA	\$ 50,000?		

LAC Request: \$ None.

Other Sources of Funding, including '81 Legislative Session.
No additional funding needed.

Dates: FY 82 (10/81 to 9/82).

Cash: \$ 25,000. See Exhibit No. 1.

Sources of Funding: USGS - \$12,500; others undecided.

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Prairie du Chien - Jordan Aquifer, cont'd.

2. <u>Hickok and Associates</u>. Design of a set of proposed remedial actions for soil and ground water contamination. See the contract for services between the MDd and the Hickok consortium.

Dates:

7/1/80 - 10/1/81

Cash:

\$120,000

Services to be Provided by Agencies:

Punding and Participation:

	Funded By	Performed By
MPCA		<u> </u>
MDH	\$ 120,000.	Hickok & Assoc.
AG		
SLP		
USGS	_	
LPA		
====	<u> </u>	

LAC Request: None.

Other Sources of Funding, including '81 Legislative Session. No additional funding needed.

Dates: None - task to be completed in '81.

Cash:

Prairie du Chien - Jordan Aquifer, cont'd.

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3. Prairie du Chien - Jordan Test Well

Initially evaluate the significance of coal tar known to be in and around Well W23 as it contributes to the contamination of the Prairie du Chien - Jordan aquifer. Install a test well, obtain cores, chemically analyse samples, and install permanent pumping facilities. Preserve samples.

The USGS study has shown that this well may have been a significant source of contaminants to the Prairie du Chien - Jordan aquifer. A determination of the effect of Well W23 on other aquifers will require additional funding.

This task will support the litigation effort, as well as the design of remedial action by Hickok and Associates.

This well is located on the former site of Reilly Tar in St. Louis Park. The site is now owned by the St. Louis Park Housing Authority.

Dates: 6 months to accomplish.

Cash: \$61,000.

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
NDH		Yes
<u>AG</u>		
SLP	2	
	1	
USGS		Yes
EPA		

LAC Request: \$ 61,000.

Other Sources of Funding, including '81 Legislative Session:
With funding by the LAC, no further funding will be needed
for this task.

Dates: None - task to be completed in '81.

Cash:

Prairie du Chien - Jordan Aquifer, cont'd.

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4. Sampling and Analysis of Water

This is needed to establish the magnitude of contamination in the major aquifer in the Metropolitan area. These analyses will include constituents recently identified as hazardous, as well as indicate locations where additional monitoring of municipal wells may be requested by the MDH to protect the public health. This work is needed to identify indicator parameters which will be useful in reducing the costs of future monitoring. Work by the USGS and MDH has shown that the contaminants are moving rapidly through the aquifer and that concentrations at individual municipal wells change rapidly.

Dates: FY 81 (10/80 - 6/81).

Cash: \$45,000.

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed Py
MPCA		
MDH		Yes?
<u>AG</u>		
SLP	-	
USGS		Yes
<u> EPA</u>		

LAC Request: \$ 45,000.

Other Sources of Funding, including '81 Legislative Session.
No additional sources of funding are needed, if funding is given by LAC.

Dates:

Additional sampling and analyses of water will be ongoing as part of a program that may be presented to the legislature in the normal biennial budget process.

Cash:

Sources of Funding:

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Prairie du Chien - Jordan Aquifer, cont'd.

5. Installation of Monitoring Wells

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Installation of 2 to 5 monitoring wells to monitor the water quality in the Prairie du Chien - Jordan aquifer. The number and location of wells will be determined on the basis of the ongoing USGS study.

Dates: FY '82 (7/81 - 6/82)

Cash: \$45,000

Services to be Provided by Agencies:

Funding and Participation:

	Punded By	Performed By
MPCA	<u> </u>	
MDH		
<u>AG</u>	L	
SLP		
	1	
USGS		Yes
EPA		

LAC Request: None.

Other Sources of Funding, including '81 Legislative Session: \$45,000

Dates:

The installation of additional monitoring wells will be coordinated with the remedial actions that are

taken.

Cash:

Sources of Funding: Legislature, USGS

Drift, Platteville Aquifer and St. Peter Aquifer

bampling and Analyses of Water

Maintenance of water quality and water level monitoring netrk in the Drift, Platteville and St. Peter aquifer by the connuing collection of time series data. The information is quested to determine the changes and spread of contamination compresent distribution.

Dates:

10/80 - 6/82

Cash: \$35,000

Services to be Provided by Agencies:

Punding and Participation:

	Funded By	Performed By
MPCA		
MDH		Yes?
AG		
SLP		
USGS		Yes
EPA		L

LAC Request: \$ 6,000 to complete the current round of sampling to 6/81.

Other Sources of Funding, including '81 Legislative Session: Legislature for \$29,000 to maintain the sampling program through 6/82.

Dates:

Funding of \$29,000 for the period from 7/81 to 6/82 would be based on legislative action taken in the '81 mession, as noted above.

Cash:

bources of Funding: Legislature, USGS

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Drift, Platteville Aquifer and St. Peter Aquifer cont'd.

7. Installation of Soil Test Holes and Monitoring Wells:

Installation of soil test holes and monitoring wells to monitor the water quality in the Drift (soil test holes), Platteville (4 wells), and St. Peter (4 wells), aquifers. The test holes will be useful for specifically locating the distribution of the bedrock valley and the wells will be placed to critically evaluate the extent and magnitude of contaminant movement via the bedrock valley into the St. Peter.

Dates: 7/81 - 6/82

Cash: \$30,000, approximately.

Services to be Provided by Agencies:

Funding and Participation:

	Punded By	Performed By		
MPCA				
MDH	L			
<u>AG</u>				
sLP				
USGS		Yes		
<u>EPA</u>	Ĺ	·		

LAC kequest: None.

Other Sources of Funding, including '81 Legislative Session:

Dates: Funds will be requested from the legislature in the next session to implement this program, using refined cost estimates.

<u>Cash</u>:

Sources of Funding: Legislature, USGS.

Drift, Platteville Aquifer and St. Peter Aquifer cont'd.

Evaluation of 40 Soil Cores

Chemical evaluation of cores to evaluate the significance of coal tar absorbed on aquifer material as a continued source of contamination. Major cores have already been collected to answer specific questions. Continued analysis of cores by newly developed techniques will be used.

Dates: FY '81 (10/80 - 6/81)

\$20,000 Cash:

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
MDH		
AG		
	1 1	
SLP		
USGS		Yes
<u>EPA</u>		

LAC Request: \$ 3,000.

Other Sources of Funding, including '81 Legislative Session: \$17,000. Cost estimates can be refined after initial work is completed.

It is anticipated that additional cores will be taken and analyzed $% \left\{ 1,2,\ldots,n\right\}$ <u>Dates</u>:

No estimate available now.

Sources of Funding: Legislature, USGS

Drift, Platteville Aquifer and St. Peter Aquifer cont'd.

9. Pumping Test

Implementation of a major, full-scale pumping test in the Platteville aquifer. This is necessary for effective design of a barrier well system and for assessing possible subsidence problems. This project would include installation of monitoring wells, water level recorders, and chemical analyses of discharge. The pumping test is critical to the design of an effective remedial effort.

 $\ensuremath{\mathsf{NPCA}}$ and $\ensuremath{\mathsf{MDH}}$ need to determine appropriate regulatory constraints.

Dates: 10/80 - 6/81

Cash: \$10,000

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
MDH		(Hickok & Asscc.)
AG		
SLP		
USGS		Yes
<u>EPA</u>		

LAC Request: \$ 10,000 .

Other Sources of Funding, including '81 Legislative Setsion:
With full funding by LAC, no further funding will oc needed for this task.

Dates:

Cash:

Preservation and Analyses of Samples

10. Preservation of Samples

Need to store samples (existing and future) in glass ampules in order to preserve the samples for re-analysis, to validate original analysis, and to preserve evidence for litigation.

1 month for the preservation of past samples. Concurrent with sample collection through June of '81. Dates:

\$5,000 (preliminary estimate) Cash:

Services to be Provided by Agencies:

Punding and Participation:

	Funded By	Performed By
MPCA		
MDH		Yes
AG		
1		
SLP		
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USGS		
EPA		

LAC Request. \$ 5,000 (preliminary estimate)

Other Sources of Funding, including '81 Legislative Session:
With full LAC funding, no additional funding will be required.

FY '82 (7/81 - 6/82) Continuing need to preserve samples as they are collected. Dates:

No estimate of additional cost for the preservation of samples. Cash:

Sources of Funding:

Preservation and Analyses of Samples cont'd.

11. Quality Assurance Program

To evaluate the adequacy of lab methods, conduct a quality assurance program, particularly for organics. Participation of 3 or more labs, including USGS, MDH and EPA (and possibly ERT, consultants to Reilly Tar). Analysis of 6 field samples, with standards prepared for use of the participating labs.

This information is helpful in establishing the repeatability and accuracy of the chemical analyses.

Documentation of the validity of the analyses is needed for technical evaluation of the problem, monitoring of municipal water supplies, and supporting the litigation.

Dates: 3 months

Cash: \$12,000

Services to be Provided by Agencies:

Funding and Participation:

Funded By		Performed By	
MPCA			
MDH		Yes	
<u>AG</u>			
SLP			
usgs		Yes	
EPA		Yes	

LAC Request: \$ 12,000 .

Other Sources of Funding, including '81 Legislative Session:
With LAC funding, no additional funding is necessary,
assuming that the scope of the analyses is not expanded
to include testing for new constituents.

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<u>Cash</u>:

Preservation and Analyses of Samples cont'd.

12. Minn. Dept. of Health Lab

To assure compatability of the results of past and future chemical analyses, particularly for PAH compounds, the MDH Lab should continue to do chemical analyses done by high performance liquid chromatography on extracts prepared by outside labs. (See related discussion outlined in Task 4 on page 4.)

<u>Dates</u>: Ongoing

<u>Cash</u>: \$5,000

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
HPCA	L	
MDH		Yes
AG		
SLP		
	. 1	
USGS		
EPA		

LAC Request: \$ 5,000.

Other Sources of Funding, including '81 Legislative Session'.

This is a continuing need that will require further funding.

Dates:

Cash:-

Sources of Funding:

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Preservation and Analyses of Samples cont'd.

13. Selection of Indicator Parameters

Based on the work outlined in Task 4, indicator parameters may be identified which will allow the design of a more efficient monitoring program.

Dates:

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Cash: None

Services to be Provided by Agencies:

Punding and Participation:

	Funded By	Performed By
MPCA	ļ	
MDH		Yes
<u>AG</u>		
SLP		
	1	
USGS		Yes
EPA		Yes

LAC Request: None.

Other Sources of Punding, including '81 Legislative Session.

Dates:

Cash:

Well Abandonment

14. Well Abandonment

To abate the spread of contamination through multi-aquifer wells, locate evaluate, sample and seal or case multi-aquifer wells. See LAC Request, dated October 1, 1980, attached as Exhibit No. 2.

Dates: 10/80 - 6/81

Cash:

\$29,640 (includes \$18,540 to locate and evaluate the Monitor Drill Well, \$1,000 to locate the Stron Block Co. Well). Does not include the \$10,000 needed to evaluate the Minnesota Sugar Beet Well and the \$5,000 to evaluate and seal the Rice Sand and Gravel Well - both located on St. Louis Park Housing Authority property.

bervices to be Provided by Agencies:

Funding and Participation:

Funded By	Performed By
	Yes
	Funded By

LAC Request: \$ 29,640 .

Other Sources of Funding, including '81 Legislative Session:

Dates:

Additional well abandonment efforts will be developed into a program that may be presented to the legislature in the normal biennial budget process. The scope of the additional well abandonment efforts will be very substantial. See the April 3, 1980 memo from Pauline M. Bouchard to Gordon Reyer. entitled: "Remedies Immediately Needed for St. Louis Park Water Supply". Pages 2 and 3 of the memo are attached as Exhibit No. 3.

Cash:

Sources of Punding:

-14-

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Litigation Expenses

15. Consulting Hydrologist

Consulting hydrologist to assist in case preparation, evaluation of ongoing studies, and remedial program.

FY '81 (10/1/80 - 6/81)Dates:

Cash:

\$22,000 (1,000 hours at \$22). To the extent that the MPCA provides an extra position in its co-pliment for this purpose, the cash need can be reduced

or eliminated.

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
MDH		
AG		
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SLP		
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USGS		
EPA		
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LAC Request: \$ 22,000, in the event no extra position is provided by the MPCA.

Other Sources of Funding, including '81 Legislative Session: With full funding by LAC, no further funding will be needed for FY '81.

FY '82 (7/81 - 6/82) Dates:

Cash: \$18,000 Sources of Funding:

FY 83 (7/82 - 6/83) Dates:

Cash: \$18,000 Sources of Funding:

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Litigation Expenses cont'd.

16. Experts Studying Remedial Efforts

The experts (Hickok Consortium) currently performing the study for Department of Health will need additional contract for trial preparation and testimony.

Dates: FY '81 (10/80 - 6/81)

Cash: \$2,750 (50 hours at \$55)

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		<u>.</u>
MDH		
AG		
	1	İ
<u> SLP</u>	1	
USGS	1	
EPA		

LAC Request: \$ 2,750.

Other Sources of Funding, including '81 Legislative Session:
With full funding by LAC, no firther funding will be needed for FY '81.

<u>Dates</u>: FY '82 (7/81 - 6/82)

<u>Cash</u>: \$3,000

Sources of Funding:

Dates: PY 83 (7/82 - 6/83)

Cash: \$3,000
Sources of Funding:

17. Epidemiological Expert

Epidemiological expert to assist in evaluating Health Department study of breast cancer in St. Louis Park and to present trial testimony.

Dates: PY '81 (10/80 - 6/81)

Cash: \$15,000 (200 hours at \$75)

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA	ļ	
MDH		
AG		
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<u>SLP</u>		
	1	ł
USGS		
EPA		

LAC Request: \$ 15,000

Other Sources of Funding, including '81 Legislative Session:
With full funding by LAC, no further funding will be needed for FY '81.

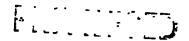
Dates: FY '82 (7/81 - 6/82)

Cash: \$4,000

Sources of Funding:

Dates: FY 83 (7/82 - 6/83)

<u>Cash</u>: \$4,000



Toxicologist

Toxicologist to provide expert testimony on laboratory studies of cancer resulting from exposures to the chemicals disposed of by Reilly Tar.

PY '81 (10/80 - 6/81) Dates:

Cash:

\$18,750 (250 hours at \$75) \$ 2,000 (travel and lodging) \$20,750 Total 1/

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
MDH		, , , , , ,
<u>AG</u>		
SLP	-	
<u> </u>	,	
USGS		
EPA		

LAC Request: \$ 20,750 1/

Other Sources of Funding, including '81 Legislative Session:
With full funding by LAC, no further funding will be
needed for FY '81. Possible funding by EPA may reduce or eliminate the need for funding.

FY '82 (7/81 - 6/82)Dates:

Cash: \$11,000 _1/

Sources of Funding:

Dates: FY 83 (7/82 - 6/83)

Cash: \$11,000 1/

With EPA filing its lawsuit in Federal District Court, the EPA is likely to assume some of these expenses as a contribution to the litigation effort.

19. Depositions

Extensive depositions will be necessary. These initial depositions will address Reilly's industrial processes and waste disposal practices, as well as procedures followed by Reilly to gather and analyze water and soil samples. Subsequent depositions will be addressed to experts retained by Reilly to rebut the government's technical witnesses.

Many of these depositions must be taken in Indianapolis at the headquarters of Reilly Tar. Court Rules do not require Reilly Tar to make its Indianapolis employees available in Minneapolis for the taking of depositions.

FY '81 (10/80 - 6/81) Dates:

Cash:

\$ 6,500 - Transcripts and related expenses \$ 1,800 - Travel expenses to Indianapolis, including lodging and meal costs

\$ 8,300 Total

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
MDH		
<u>AG</u>		
<u>SLP</u>		
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USGS		
EPA	L	

LAC Request: \$ 8,300.

Other Sources of Funding, including '81 Legislative Session: With full funding by LAC, no further funding will be needed for FY '81.

FY '82 (7/81 - 6/82) Dates:

 $10,000\ for\ additional\ depositions, transcripts and appeal expenses.$ Cash:

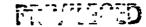
Sources of Funding:

Dates: FY 83 (7/82 - 6/83)

\$10,000 for additional depositions, transcripts and appeal expenses. Cash:

Sources of Punding:

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20. Document Management

Micrographics and computer services are required to provide legal and technical personnel with access to needed case information.

- 1. Micrographics (in progress)
 - Pilming by Administration Micrographics Services Unit has been funded by AG.
 - b. Workers for preparation are being supplied by MPCA, MDH and AG.
 - c. Creation of indices with use of existing State software is under investigation.
- 2. Computerized Litigation Support Services

Creation of data base to provide access to voluminous documents; computer use; software lease; technical support for maintenance.

- If full services are provided by an experienced vendor, estimate; \$180,000 plus.
- b. If document screening and analysis is done under AG supervision with locally hired staff and State resources, it may be possible to reduce costs to an estimated \$100,000.

Dates: PY '81 (10/80 - 6/81)

Cash: \$100,000 - \$180,000, plus

Services: Services provided by State personnel are described above.

Punding and Participation:

	Funded By	Performed By
MPCA	\	
MDH		
<u>AG</u>		
<u>SLP</u>	 	
USGS		
EPA		

LAC Request: \$ 100,000.

20. Document Management cont'd.

Other Sources of Funding, including '81 Legislative Session:

Discussions are in process with the EPA of federal resources to assist in this task. A further refinement of these cost projections will not be possible until October 15, when vendor estimates and further response from the EPA have been received.

Dates: FY '82 (7/81 - 6/82)

Cash: \$50,000

Sources of Funding:

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Coordination of Litigation With EPA and Justice Department - Travel to Chicago and Washington, D.C.

In order to coordinate the joint litigation effort by Minnesota and the Federal Government, travel to Chicago (2 visits by 3 people) and to Washington, D.C. (1 visit by 3 people) will be necessary. These meetings will address document management and computer litigation support, as well as the development of strategy for expediting the case, the selection of vitnesses, the development of testimony and the briefing of legal contentions.

10/80 - 6/81 Dates:

Cash:

\$1,000 - 1 visit to Washington, D.C. \$1,000 - 2 visits to Chicago \$2,000 Total

Services to be Provided by Agencies:

Funding and Participation:

	Funded By	Performed By
MPCA		
MDH		
<u>AG</u>		
<u>SLP</u>	 	
	Ì	
USGS		
EPA		

LAC Request: \$ 2,000.

Other Sources of Funding, including '81 Legislative Session:
With full funding by LAC, no further funding will be needed for FY '81.

PY '82 (7/81 - 6/82) Dates:

Cash: \$2,000

Sources of Punding:

Dates: PY 83 (7/82 - 6/83)

\$2,000 Cash:

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Attorney General - MPCA

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Reilly Tar File

10/1/80

Dennis M. Coyne Special Assistant Attorney General

Update to the Tasks Memo of 9/10/80

Prairie du Chien - Jordan Aquifer

1. USGS Prairie du Chien - Jordan Aquifer Project

with the \$20,000 provided by the PCA and the MDH, together with the \$10,000 provided by St. Louis Park, the State wants the USGS to: (1) complete the computer simulation model of the Prairie du Chien - Jordan Aquifer, (2) compile pumpage and water level data, (3) provide consultant services to the cooperators, and (4) evaluate newly discovered wells.

The proposal was originally drafted by the USGS with the assumption that \$50,000 would be available from EPA. However, most or all of the \$50,000 will be directed to other activities.

What will be the scope of this Task without the \$50,000 in federal support? How will this Task inter-face with Task Nos. 3 through 13?

The FY 82 (10/81 to 9/82) need for \$12,500 (with \$12,500 matched by the USGS) has not been addressed.

2. Hickok and Associates

Hickok and Associates have already been retained.

The pump test (Task No. 9) is important as a basis for Hickok's design of the barrier well system. The pump test needs to be done prior to July of 1981; therefore, the \$10,000 appears as an LAC request.

3. Prairie du Chien - Jordan Test Well

Federal funds will be available to install a pump and to sample water from W23, as well as to sample the solid material at the bottom of W23 (but not for drilling into that material). Federal funds will also be available for the possible sampling of W105, the Sugar beet Well on the Reilly Site.

10/1/80

The installation of the test well (\$61,000) is projected for the period from July, 1981 through June, 1982.

4. Sampling and Analyses of Water

· EPA funds will be available for the "snapshot" samples which will be taken and analyzed through March of 1981, when the EPA contract with MRI expires.

The time series sampling from March, 1981 through June, 1981, needs to be done, with a cost projection of \$7,500 for that time period. \$30,000 is needed for the period from July, 1981 through June, 1982.

5. Installation of Monitoring Wells

The cost of installing monitoring wells (\$45,000) is projected for the period from July, 1981 through June, 1982.

Drift, Platteville Aquifer and St. Peter Aquifer

6. Sampling and Analyses of Water

EPA funds are available for sampling and analyses through March of 1981.

The remaining sampling (projected to cost \$29,000) is planned for the period from July, 1981 through June, 1982.

7. Installation of Soil Test Holes and Monitoring Wells

The installation of the soil test holes and monitoring wells is projected at a cost of \$30,000 for the period from July, 1981 through June, 1982.

8. Evaluation of 40 Soil Cores

EPA runds will be available for the evaluation of new (and some old) soil cores. Most of the soil cores will be taken in the vicinity of the Reilly Tar Site.

9. Pumping Test

Federal funds are not available for the pumping test.

The cost of the pumping test (\$10,000) is projected as an immediate need, because the Hickok study needs this work to be done as a basis for its evaluations.

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Preservation and Analyses of Samples

- 10. Preservation of Samples

The cost of perserving the samples (\$5,000) is projected for the period from July, 1981 through June, 1982.

11. Quality Assurance Program

Federal funds are available to meet part of the quality assurance program cost. (The federal share is calculated to be \$3,000.) The remaining cost of the quality assurance program (\$9,000) is projected as an immediate cost.

12. Minn. Dept. of Health Lab

Since the MDH has not committed itself to do any further high performance liquid chromotography work, other than its routine sampling of the drinking supply in St. Louis Park, no cost projection is made for the MDH.

13. Selection of Indicator Parameters

No cost is associated with the selection of indicator parameters.

Well Abandonment

14. Well Abandonment

While the MDH will be before the LAC on October 1, 1980, there still is no commitment to proceed with an overall well abandonment program.

Who will prepare the well abandonment program and how will the program be funded?

Litigation Expenses

15. Consulting Hydrologist

There is still a need for the State to have a consulting hydrologist.

Cost projections are as follows:

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\$22,000 for the period from 10/80 - 6/81

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10/1/80

\$18,000 for the period from 7/81 - 6/82 \$18,000 for the period from 7/82 - 6/83.

- To the extent that the MPCA provides an extra postion in its compliment for this purpose, the cash need can be reduced or eliminated.

The Justice Department and the EPA have decided to retain a hydrologist to analyze and interpret raw data gathered by the USGS and to testify at the time of trial. (The USGS is slow in publishing its interpretations and is reluctant to take an advocate's role.) This hydrologist may be provided by EPA from its existing staff.

16. Experts Studying Remedial Efforts

Geraghty and Miller, who ordinarily do not testify in support of the Federal Government, may be unavailable to prepare for trial and provide testimony.

If available, the cost projections for Geraghty and Miller are as follows.

\$2,750 for the period from 10/80 - 6/81 \$3,000 for the period from 7/81 - 6/82 \$3,000 for the period from 7/82 - 6/83.

17. Epidemiological Expert

The Justice Department has agreed to retain an epidemiological expert. (The State projected the cost of this expert to be \$23,000 through June, 1983.)

18. Toxicologist

The Justice Department has agreed to retain a toxicologist. (The State projected the cost for this expert to be\$42,750 through June of 1983.

18a. Chemical Engineer

The Justice Department and the EPA are likely to provide a chemical engineer to analyze the Reilly Tar process and to testify, as necessary. This engineer may be made available by the EPA from its existing staff.

The MPCA has supplied one of its chemical engineers to evaluate the Reilly process.

-5~

10/1/80

- 18b. Chemist

The Justice Department and the EPA are likely to provide a chemist to testify that the compounds found in the soil and water samples are derivatives of the coal tar used by Reilly Tar in its processes.

19. Depositions

The State needs to fund the cost of depositions.

Cost projections are as follows:

\$8,300 for the period from 10/80 - 6/81 \$10,000 for the period from 7/81 - 6/82 \$10,000 for the period from 7/82 - 6/83.

20. Document Management

The need for document management, as described on pages 20b and 20c of the Tasks Memo dated September 10, 1980, has not changed. The Justice Department has agreed to provide a paralegal to participate in the screening of documents, the document analysis and data capture.

21. Coordination of Litigation With EPA and Justice Department - Travel to Chicago and Washington, D.C.

There is still a need to coordinate the litigation with EPA and the Justice Department.

Cost projections are as follows:

\$1,500 for the period from 10/80 - 6/81 \$2,000 for the period from 7/81 - 6/82 \$2,000 for the period from 7/82 - 6/83.

PRIV".EGED

Summary of Expert Witnesses and Consultants

	·	Managaraka	11 C
	Task	Minnesota	U.S.
No. 15	Hydrologist	x	x
No. 16	Remediai Expert	?	?
No. 17	Epidemiologist		x
No. 18	Toxicologist		x
No. 18a	Chemical Engineer	(x)	x
No. 18b	Chemist		х

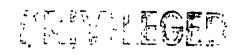
PRIVILEGED

Cash Needs - PCA & MDH

<u>Tasks</u>	10/80 - 6/81	7/81 - 6/82	7/82 - 6/83
No. 1 (Study)	PCA: \$5,000 MDH: \$5,000	(\$12,500)	
No. 2 (Hickok)	(MDH: \$120M)		
No. 3 w 23	EPA Funds	\$61,000	
No. 4 (Sampling)	\$7,500 <u>1</u> /	\$30,000	
No. 5 (Monitor Wells)		\$45,000	
No. 6 (Sampling)	EPA Funds	\$29,000	
No. 7 (Soil & Welis)		\$30,000	
No. 8 (Soil Cores)	EPA Funds		
No. 9 (Pump Test)	\$10,000		
No. 10 (Preserve Samples)		\$5,000	
No. 11 (QA)	\$9,000 <u>2</u> /		
No. 12 (MDH Lab)	See FN 3		

^{2/ \$9,000} for Quality Assurance at labs, other than MRI.

_3/ IN the absence of an agreement by MDH to do HLPC analyses, no cost projection for MDH work.



Tasks	10/80 - 6/81	7/81 - 6/82	7/82 - 6/83
No13 (Indicator Parameters)	No Cost		
No. 14 (Well Abandonment)	(\$29,640 in LAC Request)	?	?
SULTOTAL	\$26,500	\$200.000	

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PRIVILEGED

Litigation Expenses:

Tasks	10/80 - 6/	<u>/81</u>	7/81 - 6/82	7/82 - 6/83
No15 (Hydrologist)	\$22,000		\$18, 0 000	\$18,000
No. 16 (Remedial Expert)	(\$2,750)		(\$3,000)	(\$3,000)
No. 17 (Epidemologist)				
No. 18 (Toxicologist)				
No. 18a (Chemical Engineer)				
No. 18b (Cnemist)				
No. 19 (Depositions)	\$8,300		\$10,000	\$10,000
No. 21 (Travel)	\$1,500		\$2,000	\$2,000
SUBTOTAL	\$31,800		\$30,000	\$30,000
No. 20 (Documents) <u>5</u> /	\$51,000 ((\$61,000)	\$25,000 (\$15,000)	\$5,000
SUBTOTAL	\$82,800		\$55,000	\$35,000
w/Aspen- search V <u>6</u> /	\$17,000		\$23,000 _4/	
TOTAL	\$99,800		\$78,000	\$35,000

^{4/} The \$23,000 can be applied to the \$17,000 previously paid, in order to purchase the Aspensearch V equipment.

_5/ This is management option "B" on the chart, "Litigation Information Management Options" prepared by K. Stevenson. 003696

^{6/} This is management option "C" on the chart, "Litigation Information Management Options" prepared by K. Stevenson.